

Before the
Federal Communications Commission
Washington, D.C. 20554

In the matter of

)	
Actions to Accelerate Adoption and)	GN Docket No. 16-46
Accessibility of Broadband-Enabled)	
Health Care Solutions and Advanced)	
Technologies)	

Communication Service for the Deaf, Inc's Reply Comments
to the Commission's Request for Comment and Data on Actions to Accelerate Adoption and
Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies

I. Promoting effective policy and regulatory solutions that encourage broadband adoption and promote health IT.

What policy measures (especially those that the FCC might pursue based on its legal authority) could accelerate the adoption and availability of broadband-enabled health technologies, solutions, and services, especially in rural and underserved areas of the country?

In the fall of 2010, Communication Service for the Deaf (“CSD”) launched Project Endeavor, funded by a grant from the National Telecommunications and Information Administration’s Broadband Technologies Opportunities Program as a Sustainable Broadband Adoption (“SBA”) project. An overarching goal of SBA projects is to promote broadband usage and adoptions in areas where broadband usage is underutilized. Project Endeavor provided subsidized broadband services and a wide array of wireless, mobile devices to Deaf and hard of hearing participants¹ in all 50 states and the U.S. Territories. Services and devices were supplemented with educational workshops, one-on-one training and technical support provided through an American Sign Language video-based contact center.

Upon conclusion of Project Endeavor, CSD created a final evaluation report (“BTOP Report”) (attached) based on the data collected over the course of the project. For purposes of responding to some of the questions put forth by the Connect2Health Task Force, two findings are particularly important: first, there is a greater gap in digital literacy among the Deaf and hard of hearing community, in large part due to the lack of accessible training². Second, it was challenging to identify Deaf and hard of hearing individuals lacking broadband access.³

CSD believes that the Commission has and continues to make an impact in increasing the availability of broadband for Americans in underserved rural communities through its *Connect America Fund*, but for the Deaf and hard of hearing community, the accessibility of digital literacy training remains wanting⁴, preventing them from using their broadband connections to its full potential. We recommend that the Commission seek out policy measures to ensure that training materials are accessible from the start, rather than allow for training material to be made accessible upon request. In addition, promotion, education and outreach efforts must be made to inform the community that these accessible training materials even exist at all.

What type of connectivity (e.g., wired or wireless; fixed or mobile) is necessary to support the deployment of health IT applications today and in the near future at the different types of health care delivery settings, from hospitals to rural clinics, etc.?

¹ BTOP Report, 2 (14,195 subsidized devices and subscriptions were provided.)

² BTOP Report, 2 “The need for more accessible training was reported by 66% of the participants. The need for further training was also confirmed by Focus Group participants.”

³ BTOP Report, 12

⁴ BTOP Report, 3 “Ongoing training is needed to alleviate the gap in digital literacy skills that has occurred due to access barriers. Training should be one-on-one or in small groups by trainers who are fluent in ASL and utilize pedagogies that incorporate visual learning techniques.”

We cannot comment on what types of connectivity are necessary specifically for health IT applications, but BTOP participants' responses to a survey demonstrated an overwhelming preference for mobile, wireless devices with video capability.⁵

What are the minimum bandwidth and speed requirements for the different types of health IT applications available today and in the near future for clinical and non-clinical settings?

Specifically for broadband-enabled telemedicine solutions, a minimum of a three-way video communication capability is required to allow for an American Sign Language interpreter to support the session. The Commission's 25 Mbps/3 Mbps definition of broadband as outlined in its 2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Development ("2015 Broadband Progress Report") is adequate to support such three-way video calls. However, because of the strong preference towards mobile, wireless devices, the Commission must also consider minimum speed requirements for mobile broadband services; despite its earlier suggestion that mobile broadband might be "complementary, rather than (a) substitute"⁶ for traditional broadband services, we have found that many individuals are in fact using it as a substitute for traditional broadband services.

II. Identifying regulatory barriers (and incentives) to the deployment of RF-enabled advanced health care technologies and devices.

In order to keep with demand, the FCC seeks information and data on the types of broadband-enabled health technologies and medical devices currently in the market and those expected to launch in the near future; the future spectrum and wireless infrastructure needs required to implement these devices; and areas of concern related to increased use and the number of wireless medical devices in health care settings and public settings.

We found that more respondents owned *either* a mobile phone *or* a tablet than owned a videophone, despite the fact that videophones were often given out for free by Video Relay Service ("VRS") companies⁷. In addition, more people used either a computer or mobile device for video communications than relied on videophones⁸.

Given that several years have passed since the BTOP Report was compiled, we suspect that the numbers skew even more strongly today towards the use of computers and mobile devices for video communication usage, alongside a concomitant shift in the telemedicine industry to

⁵ BTOP Report, 3

⁶ *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126, 2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment, FCC 15-10 (rel. Feb. 4, 2015), paragraph 11

⁷ BTOP Report, 22

⁸ BTOP Report, 23

app-based or browser-based telemedicine technologies. As a result, in part due to the speed with which the telemedicine industry is expanding, we urge the Commission to reinforce the need for telemedicine technology to be designed in accordance with the principles of universal design, to ensure the accessibility of such technology not only for those who are Deaf or hard of hearing, but also those with other disabilities. Because telemedicine can be, and is, used in urgent care or life threatening situations, it is crucial that accessibility be a foresight in the development process, and not an aftersight that comes to light only when a lack of accessibility fails a patient.

III. Strengthen the nation's telehealth infrastructure through the FCC's Rural Health Care (RHC) Program and other initiatives.

In this section, the FCC seeks to identify broadband-related programs and initiatives that can facilitate the availability and accessibility of broadband-enabled health technologies, solutions, and services – such as telehealth and telemedicine -- in rural and underserved areas of the country, given ongoing challenges related to accessing healthcare services in these areas. One such FCC program is the Rural Health Care (RHC) Program, which has made the benefits of broadband-enabled health services, such as telehealth and telemedicine, more available to consumers in rural and remote areas. Among other things, the Public Notice seeks comment and information on whether the FCC's RHC Program as a whole, including its regulatory framework and the manner in which it is administered, remains effective and is keeping pace with changes in the delivery of health care, as well as technological developments; and If not, the FCC seeks comment on what changes it might make (based on its authority) to the RHC Program.

In our response to question II, we emphasized the importance of accessible telemedicine technology. With respect to rural and underserved areas of the country, the accessibility of telemedicine solutions becomes more crucial, as access to medical services via telemedicine can be more expedient than visiting a doctor's office, urgent care center, or, in some cases, than calling 911. The accessibility of telemedicine technology can save lives where people with disabilities are concerned, and we urge the Commission to act to the fullest extent of its authority to emphasize the importance of universal design principles as an integral part of telemedicine technology development.

IV. Raising consumer awareness about the value proposition of broadband in the health care sector and its potential for addressing health care disparities.

How might the Commission ensure that certain groups—e.g., rural consumers, those living on Tribal lands, older Americans, people with disabilities, military veterans, non-English speakers, and the economically disadvantaged—are fully aware of the availability and benefits of broadband-enabled health services and technologies? Are there any states, cities, and organizations engaged in similar efforts that could lead to potential partnerships?

To what extent do costs, socioeconomic status, and digital literacy issues impact adoption?

One of the findings in the BTOP Report was that digital literacy -- or lack thereof -- had a significant effect on broadband utilization. Specifically, to the Deaf and hard of hearing community, and to other populations with sensory disabilities, there exists a lack of *accessible* training material to close the digital literacy gap. Of 3,793 participants that completed the post digital literacy survey, nearly eleven percent indicated that they had limited or less than limited ability to use computers and the Internet, indicating that at best, they needed training on basic use.⁹ American Indians and Alaskan Natives had the highest percentage of limited and lower ratings.¹⁰ By comparison, with respect to ownership of Internet-enabled devices, less than half of that number -- 5% -- indicated that they did not own an Internet-enabled device.¹¹ Furthermore, identifying individuals lacking access to broadband was challenging.¹² Accordingly, we believe training to be a critical factor in increasing broadband usage, including with respect to telemedicine applications.

We are interested in learning how broadband can enable healthcare-related support systems to connect patients to the people, services and information they need to get well and stay healthy.

People who are Deaf and hard of hearing and who speak ASL will need to be considered when designing broadband-enabled health technologies and services. Deaf and hard of hearing people have reported poor understanding of their clinicians' instructions during in-person visits, an unfortunate result of a lack of accessibility, such as American sign language interpreters, in healthcare communication.¹³ Although medically experienced certified ASL interpreters resulted in effective communication facilitation, some Deaf and hard of hearing people reported that these interpreters were not often available.¹⁴ Regardless of educational attainment, Deaf and hard of hearing people display low health literacy, placing the population at risk for health consequences.¹⁵ As an example, in one study, a significant percentage of Deaf and hard of hearing respondents lacked sufficient knowledge associated with common health conditions. This study indicated that 40% of Deaf and hard of hearing respondents were not able to identify any of the seven most common signs of a heart attack, and 62% of respondents were not able

⁹ BTOP Report, 17 (391 respondents indicated that they had limited, very limited, or non-existent ability to use computers or the Internet.

¹⁰ BTOP Report, 17

¹¹ BTOP Report, 18

¹² BTOP Report, 12 "Despite a concerted effort by the Outreach team, identifying deaf and hard of hearing persons without broadband access was challenging, and numbers of new broadband adopters remained below initial estimates."

¹³ Steinberg, A.G., Barnett, S., Meador, H.E., Wiggins, E.A., & Zazove, P. (2006). Health care system accessibility: experiences and perceptions of deaf people. *Journal of General Internal Medicine*, 21. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1828091/>

¹⁴ Ibid.

¹⁵ Pollard, R.Q., & Barnett, S. (2009). Health-related vocabulary knowledge among deaf adults. *Rehabilitation Psychology*, 54. Retrieved from http://www.researchgate.net/profile/Robert_Pollard_Jr/publication/26241110_Health-related_vocabulary_knowledge_among_deaf_adults/links/00b4952a86fc63b0de000000.pdf

to identify any of the seven most common signs of a stroke.¹⁶ This lack of knowledge potentially prevents these individuals from identifying these conditions early and benefitting from immediate treatment.

Respectfully submitted,

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/s/ Christopher Soukup

Chief Executive Officer

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¹⁶ Margellos-Anast H., Hedding T., & Miller, L. (2004). Improving access to health and mental health for Chicago's deaf community: a survey of deaf adults. Chicago (IL): Sinai Health System and Advocate Health Care. Retrieved from <http://www.healthtrust.net/sites/default/files/publications/improvingaccess.pdf>